

Work Order ID 98303***98303***

Page 1

March-12-13 1:46:25 PM

Item ID: D2010-104

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Mirror Arm 369/500

Stop

NS2

Start Date: 3/11/13 Start Qty: 6.00

6

Cust Item ID:

Required Date: 3/18/13 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan: MLTDate: 13-03-15

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D2010	Rev D								
100		0.00							
100	NC BRAKE								
Brake NC	Memo	0.00							
	Punch per Dwg. D2010-104 and Spec Control Dwg D2727								
	Identify as D2010-104								
110		0.00							
110	Small Fab								
Small Fab	Memo	0.00							
	1- Bend as per Dwg D2010 using bending Jig D2010-104T2								
	2- Deburr ends								
120		0.00							
120	Small Fab								
Small Fab	Memo	0.00							
	1- flare before installing plug as per dwg D2010								
	2- Install D2057 plug as per Dwg D2010								

6 0 13-05-15 FF

FF 13-05-15

6 φ 13-05-15

FF 13-05-22

6 φ 13-05-22

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS						
			Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other					
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification	QC Inspector
Doc/Data												
Equip/Tooling												
Operator												
Material												
Setup												
Other												
Process												
Supplier												
Training												
Unapproved												
FAULT CATEGORY												
Landing Gear					General							
Bending		Bend		Grain		Ovalized		Pressure/Forced				
Centre Not Concentric to O/S		BOM/Route		Hardware		Over/Under tolerance		Temperature/Cure				
Cracks		Broken/Damaged		Inspection Incomplete		Part Incorrect		Weld				
Crushed/Crimped.		Burrs		Instructions Incomplete/Unclear		Part Lost/Missing		Wrong Stock Pulled				
Cuffs		Contamination		Maintenance		Part Moved						
Heat Treat		Countersink		Mislabeled		Positioned Wrong						
Inspection Strip in Tube		Cut Too Short		Misread		Power Loss/Surge		Other				
Ripples in Bend		Drill Holes		Offset								
Torque Waves in Extrusion		Drawing		Out of Calibration								
Turning Sequence		Finish		Out of Sequence								
Wave/Twist in Tube		Folio		Outside Dimensions								

Work Order ID 98303***98303***

Page 2

March-12-13 1:46:25 PM

Item ID: D2010-104

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Mirror Arm 369/500

Stop

NS2

Start Date: 3/11/13 Start Qty: 6.00

6

Cust Item ID:

Required Date: 3/18/13 Req'd Qty: 6.00

6

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

QC5- Inspect part completeness to step on W/O

0.00

AS
21
20***130***

QC

Quality Control

Memo

0.00

BS 25

140

Black Sandtex(Ref:4.3.5.7) per QSI005 4.3

0.00

140

Powdercoat

Powder Coating

M123480

Memo

8:30 0.00
320 17
9:00

6x Mf 13/05/27

150

QC3- Inspect Part Finish

0.00

150

QC

Quality Control

Memo

0.00

6x 4 Mf 13/05/27

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS										
			Rework Scrap Use-as-is Work Order Update		Skid-tube Machining Thermoforming Large Fab		Crosstube Small Fab Finishing Composite		Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier		Engineering Quality Other				
Root Cause		Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification	QC Inspector			
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved															
FAULT CATEGORY															
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube					General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions								<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other		

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Part No. _____	Rework <input type="checkbox"/>	Scrap <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Machining <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>			
NCR No. _____	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Finishing <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>			
	Work Order Update <input type="checkbox"/>		Composite <input type="checkbox"/>		Rec/Store/Packaging <input type="checkbox"/>	Supplier <input type="checkbox"/>	Other <input type="checkbox"/>			
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Doc/Data										
Equip/Tooling										
Operator										
Material										
Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions						
				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Other						
				<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled						

Picklist Print

March-12-13 1:46:24 PM

Page 1

Work Order ID: 98303

Parent Item: D2010-104

Start Date: 3/11/13

Required Date: 3/18/13

Parent Item Name: Mirror Arm 369/500

Start Qty: 6.00

Required Qty: 6.00

Comments: IPP A04.02.17New issueKJ/JLM

IPP Rev:B 08-05-27 as per ECN1195P DD verified by:EC

IPP Rev:C 08-06-20 rev.D as per dwg DD verified by:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M304TR0.500W.049 304 RD Tube .500 x .049W		Purchased	No			100	f	208.6120	1.5	9.4736844	FF	13-05-15	

Location Loc Qty Loc Code

GA 48.5

120633 48.5

MAT017 160.112016

119087 0.000016

123449 160.112

9.4736

D2057
Plug

Manufactured	No	110	Each	58.0000	1	6

Location Loc Qty Loc Code

GA 1

75070 1

ST004 57

71888 1

86724 2

90019 24

97932 30

6

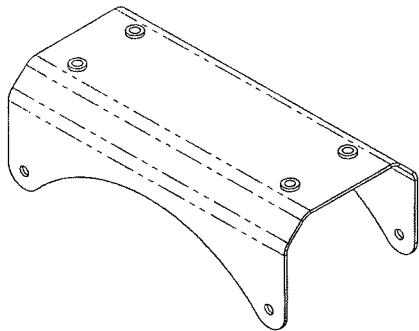
NCR: Yes / No

DQA: Date:

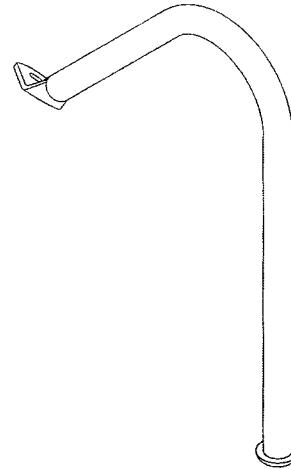
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

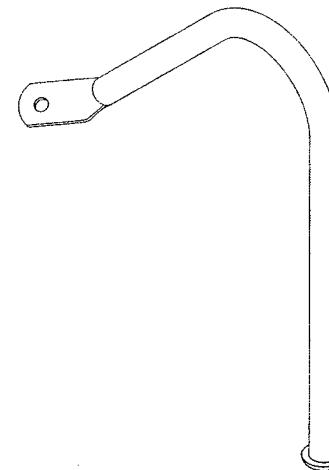
Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>									
Root Cause Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved		Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description		Sign & Date	Verification	QC Inspector			
FAULT CATEGORY															
Landing Gear Bending Centre Not Concentric to O/S Cracks Crushed/Crimped. Cuffs Heat Treat Inspection Strip in Tube Ripples in Bend Torque Waves in Extrusion Turning Sequence Wave/Twist in Tube				General Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/>			Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions <input type="checkbox"/>						Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/>		Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> <input type="checkbox"/> Other _____



D2010-101 MIRROR BRACKET



D2010-103 ARM



D2010-104 ARM

D COPY

PRINT

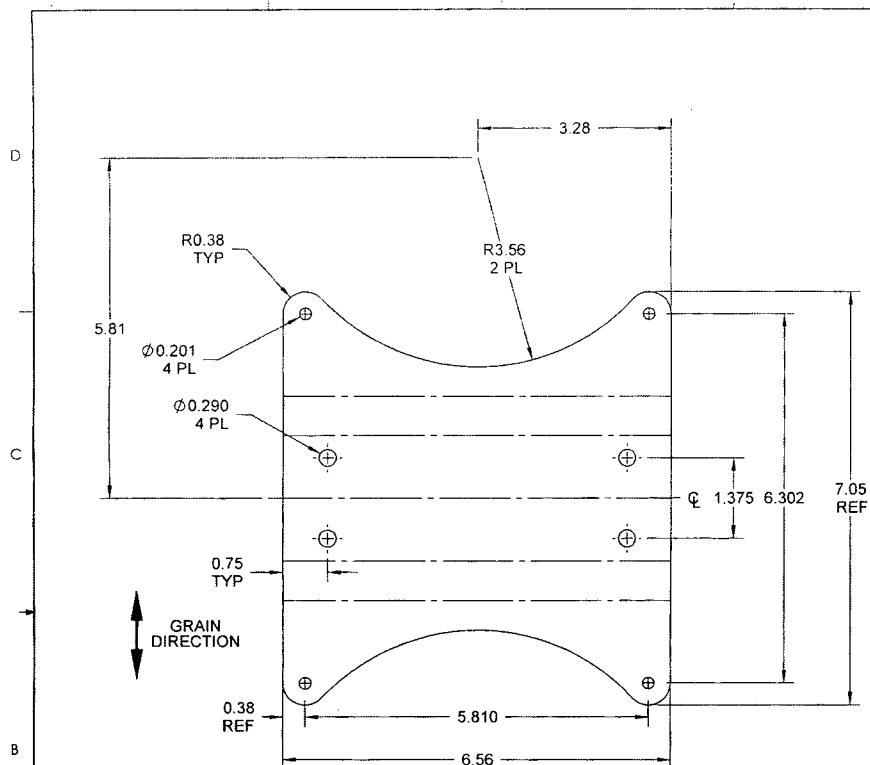
FOR

ML5

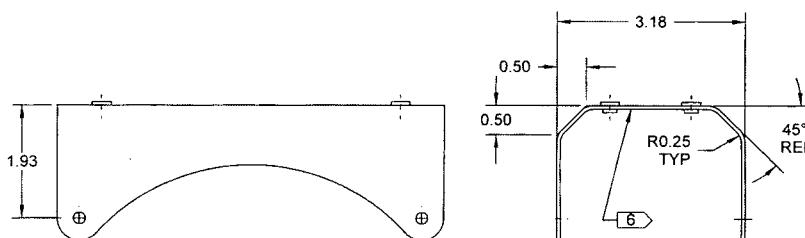
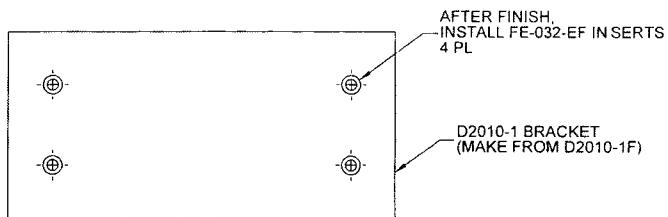
13-03-15

RELEASED
08.06.10

D	REDRAWN IN SOLIDWORKS; ADD D2010-1F FLAT PATTERN FOR D2010-101 (ZN B7-2); Ø0.500 X 0.049 WALL WAS Ø0.500 X 0.035 WALL (ZN B1-3, B1-4); REASON: TUBING CRACKING DURING SERVICE	PH	08.06.10
C	1.93 WAS 2.00; 0.50 WAS 0.62	KE	97.10.31
B	7.90 WAS 10.90	JB	92.03.17
A	NEW ISSUE	JB	90.12.15
REV.	DESCRIPTION		
DESIGN	JB	DART AEROSPACE LTD	
DRAWN	JB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	JB	DRAWING NO.	REV. D
MFG. APPR.	JB	D2010	SHEET 1 OF 4
APPROVED	JB	TITLE	SCALE
DE APPR.	JB	MIRROR BRACKET	NTS
DATE	08.06.10	COPYRIGHT © 1990 BY DART AEROSPACE LTD THIS DOCUMENT IS PROPRIETARY INFORMATION OF DART AEROSPACE LTD. IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

D2010-1F FLAT PATTERN 

QTY -101	P/N	DESCRIPTION
X	D2010-101	MIRROR BRACKET
1	D2010-1	BRACKET
4	FE-032-EF	INSERT



D2010-101 MIRROR BRACKET

RELEASED
08.06.10

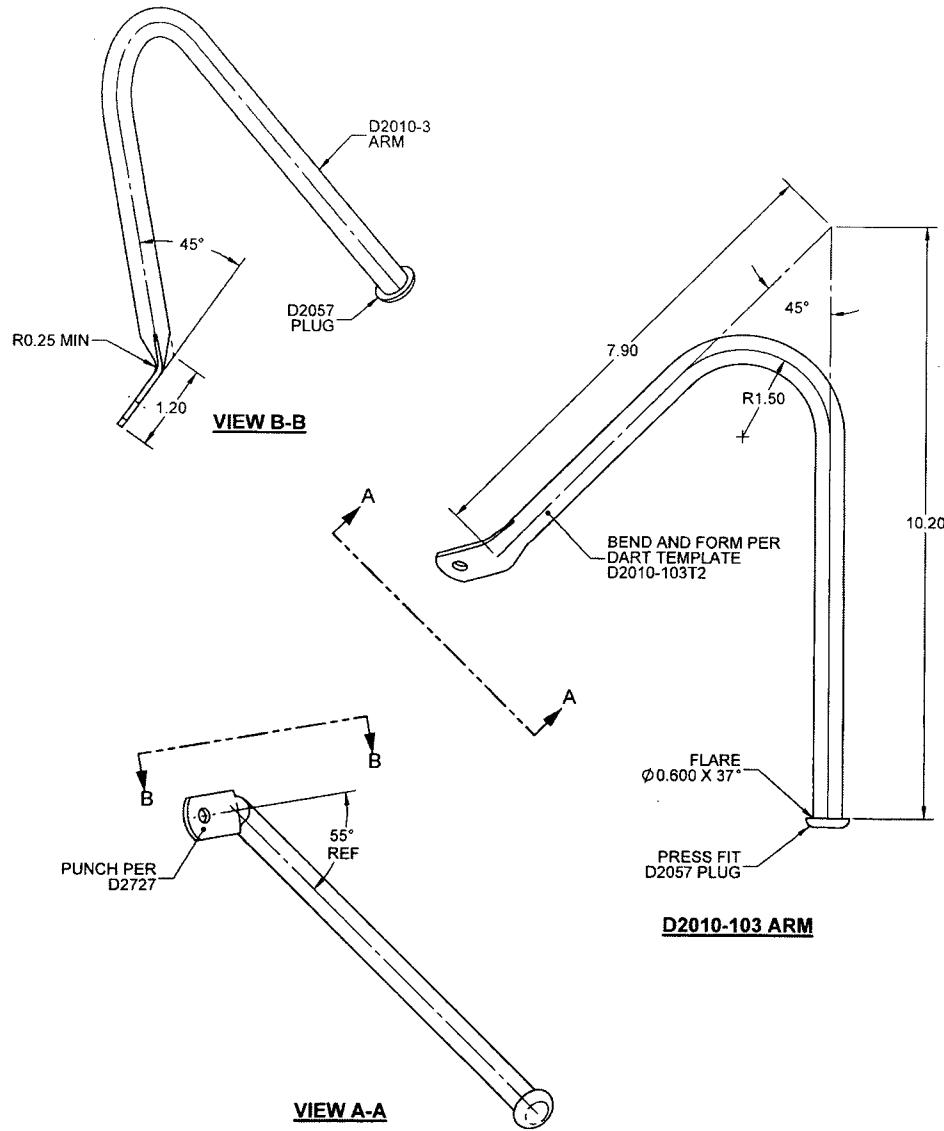
NOTES:

- 1) MATERIAL: D2010-1F: 2024-T3 ALUMINUM SHEET, 0.063 THICK PER AMS-QQ-A-250/4 OR AMS 4037 (REF DART SPEC M2024T3S.063)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1 POWDER COAT BLACK SANDTEX (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D2010-101" USING WHITE FINE POINT PERMANENT INK MARKER OR LABEL
- 7) WEIGHT: 0.23 lbs

DESIGN	JB	DART AEROSPACE LTD
DRAVN	JB	HAWKESBURY, ONTARIO, CANADA
CHECKED		REV. D
MFG. APPR.	JB	D2010
APPROVED	JB	SHEET 2 OF 4
DE APPR.	JB	TITLE
DATE	08.06.10	SCALE
		NTS

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QTY	P/N	DESCRIPTION
-103		
X	D2010-103	ARM
1	D2010-3	ARM
1	D2057	PLUG



RELEASED
08.06.10

NOTES:

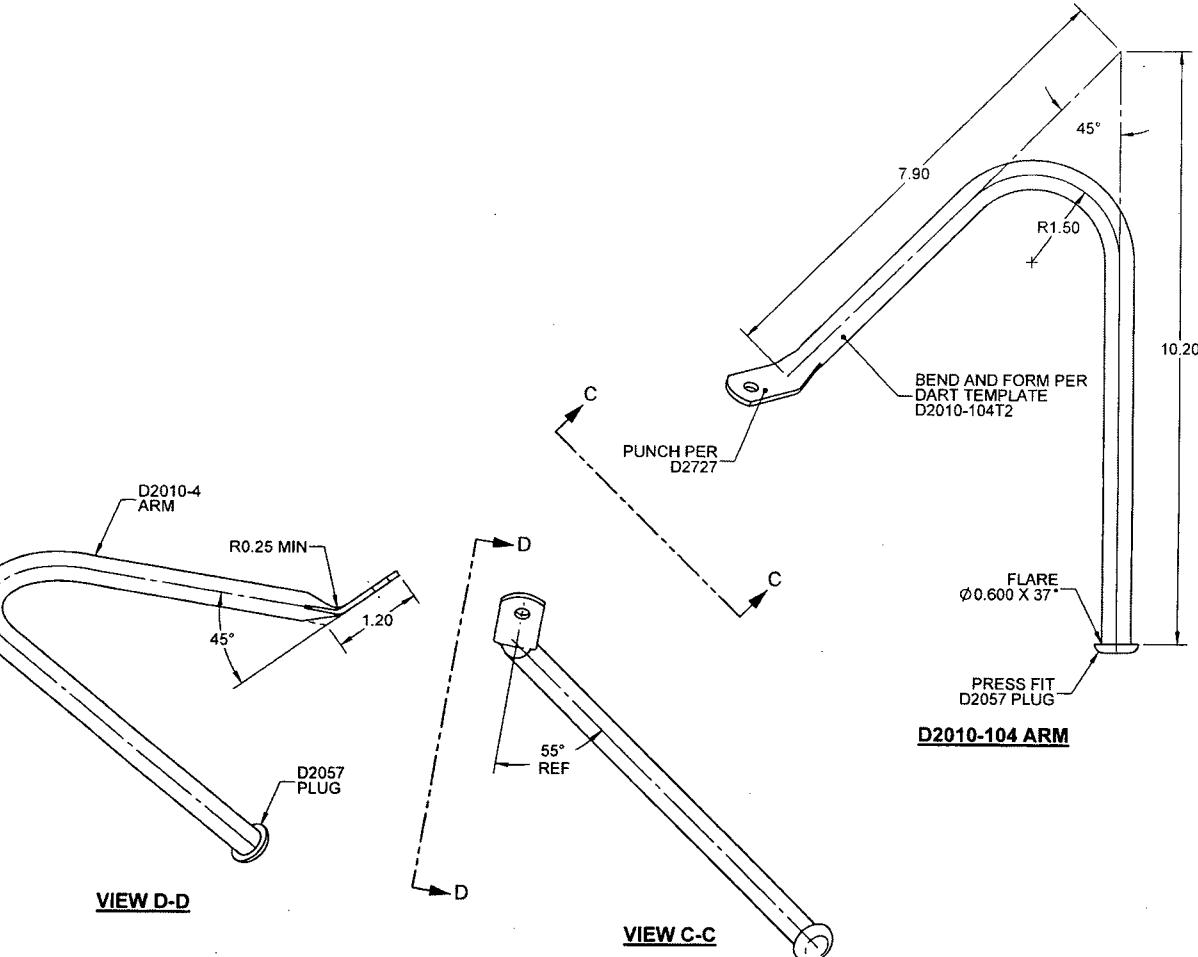
- 1) MATERIAL: D2010-3: AISI 304/316 SS SEAMLESS ROUND TUBING, Ø 0.500 X 0.049 WALL (REF DART SPEC M304TR0.500W.049)
- 2) FINISH: POWDER COAT BLACK SANTEX (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D2010-103" USING WHITE FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.34 lbs

DESIGN	JB	DART AEROSPACE LTD
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED	PH	DRAWING NO. D2010
MFG. APPR.		REV. D
APPROVED		SHEET 3 OF 4
DE APPR.		TITLE MIRROR BRACKET
DATE 08.06.10		SCALE NTS

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8 7 6 5 4 3 2 1

QTY	P/N	DESCRIPTION
-104		
X	D2010-104	ARM
1	D2010-4	ARM
1	D2057	PLUG



NOTES:

- 1) MATERIAL: D2010-4: AISI 304/316 SS SEAMLESS ROUND TUBING, Ø0.500 X 0.049 WALL (REF DART SPEC M304TR0.500W.049)
- 2) FINISH: POWDER COAT BLACK SANTEX (4.3.5.7) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D2010-104" USING WHITE FINE POINT PERMANENT INK MARKER
- 7) WEIGHT: 0.34 lbs

DESIGN	JB	DART AEROSPACE LTD
DRAWN		HAWKESBURY, ONTARIO, CANADA
CHECKED		DRAWING NO. D2010 REV. D
MFG. APPR.		SHEET 4 OF 4
APPROVED		TITLE MIRROR BRACKET
DE APPR.		SCALE NTS
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